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PROGRESS OF AGRICULTURE
IN YUGOSLAVIA

PRODUCTION OF AGRICULTURAL MACHINERY

Previously, the import of plows by Yugoslavia has averaged 9,000 per year. In 1949, one enterprise alone will produce three times as many. The previous yearly production of seed separators has been between 50-60. In 1949 one enterprise alone will produce 30 times as many. At present, grain, corn, beet, and potato planters are being built in Yugoslavia. These are further subdivided into various types according to the number of rows they can plant at one time. In addition to these, combination planters for several crops are being manufactured. Grain-hulling machines, hay presses, and hay cutters, which previously were hand-operated, are now operated by motor.

During the first 2½ years of the Five-Year Plan, certain farm machines have been mass produced for the first time. Two types of threshing machines are being mass produced. Type JV 660 is for hilly regions and has a smaller capacity than the JV 1070, which is for flat country.

In 1949, preparations are being made for the production of threshing machines for industrial plants, such as sunflowers and hemp. Horse-drawn mowers will also be mass produced. Their mass production will be twice as great as the average import during the last 2 years. Enough bearings will be produced in Yugoslavia to make mower production independent of imports of bearings from abroad. The mower is also a combination machine since it can be adjusted for mowing hemp.

The Yugoslav "Poljoprivrednik"-type seed selector is being mass produced in 1949. This selector was tested and compared with the Rex-2 selector, a modern Hungarian machine. Tests show that it is better than the Hungarian selector. Tractor-drawn cultivators are being mass produced in 1949. Also, all the technical preparations for the mass production of tractor-drawn sowers have been made in 1949. In the summer of 1950, a strong five-sided tractor plow will be available. Machines and devices for processing flax and hemp are being mass produced, as well as machinery for hemp factories.

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Machines of the turbine type, which will improve working conditions in hemp factories, are being tested. Elevators, shredders for ensilage, pumps for fertilizer, dusters, and mill hammers are also being produced.

Yugoslavia plans to produce a plow for rice fields, which digs two furrows with a 35-centimeter ridge between them. This is not produced abroad.

The rotary digger with one rotor is a completely new type of reclamation and earthwork machine. This machine can dig a furrow 80 centimeters deep and 2 meters wide and can remove 80 cubic meters of earth per hour, thus replacing 220 men. In addition, it can pile earth into an embankment by means of an attached conveyor. The direction of the furrow is formed without any special intervention from the operator of the digger. This machine is being produced serially in 1947.

The rotary digger with two rotors was made especially for digging the Danube-Tisa-Danube Canal. It can dig furrows 80 centimeters deep and 4 meters wide, remove 160 cubic meters of earth per hour, and thus replace 500 or more workers. The designer of these machines is Dragoljub Beslin.

PRODUCTION OF STATE FARMS

At present, state farms, communal farms, and farms operated by enterprises and organizations in all Yugoslavia own 434,050 hectares of land and 1,973 installations.

State farms in Yugoslavia now own 67 percent of the grain-growing areas, 12 percent of the livestock and farming areas, 19 percent of the mountain areas, 2 percent of the subtropical crop areas, and one percent of the Mediterranean areas. State farms alone own 300,000 hectares of land, of which somewhat less than one-third is under the supervision of the Federal Ministry of Agriculture, while two-thirds of the total area is under the supervision of the republic.

Investments in state farms in 1948 were 189 percent of the 1947 total, and according to the Five-Year Plan, will be 258 percent in 1949.

The production of grain has been most successful, as the Five-Year Plan for grain production was already fulfilled in 1947. Also in 1947 state farms produced 24 percent more grain than privately owned farms.

Cattle-breeding also is improving greatly. The number of cows on eight state farms (excluding the "Belje" Farm) at the end of 1948 was 174 percent of the total at the end of 1947; the amount of cattle fodder in 1948 was 459 percent of the 1947 figure; and the production of milk in 1948 rose to 232 percent of the 1947 total. While 2.13 hectares of land supported one cow in Czechoslovakia in 1947, 3.62 hectares of land were required to support one cow in Serbia in the same year, and as many as 7 hectares were required in Bosnia.

As compared to 1948, state farms in 1949 are scheduled to increase the number of their pigs by 218 percent, cattle by 200 percent, sheep by 300 percent, and poultry by 400 percent.

In 1948, the production of various grain seeds on state farms was 14,810 tons and 1,619 tons for vegetable seeds.

About 400,000 hectares of arable land will be available to state farms after the Five-Year Plan for reclamation is completed. In 1949, 600 hectares of the reclaimed "Jelas Polje" have been planted with rice.

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RECLAMATION

The Five-Year Plan provides for a 20-percent increase in agricultural products. This increase is subdivided into an increase of 13 percent for grain (25 percent for wheat), 928 percent for cotton, 274 percent for sugar beets, and 72 percent for potatoes.

For the above to materialize, reclamation work will play an important role, not only because it makes more areas available for agriculture, but also because it increases the productivity of the already existing areas. Yugoslavia has 2,343,000 hectares of land under water, of which only half is even partially drained.

The following table shows the areas protected from floods, drained, and irrigated, in Yugoslavia:

Year	Area			Length		
	Ha Protected from Floods	Ha Drained	Ha Irrigated	Km of Dams	Drain- age (km)	Irri- gation (km)
Before 1918	982,437	1,239,947	-	2,010	10,894	-
1928 to 1941	354,464	394,794	31,065	419	1,386	100
Total	1,336,901	1,634,741	31,065	2,429	12,290	100

In the summer, Yugoslav rivers overflow during a period of 3 months. Thus far 120 pumping stations, with a total rating of 18,812 horsepower and a pumping capacity of 133,000 liters of water per second, have been constructed for the draining of swamps. However, these stations are insufficient for the amount of work to be done, and therefore they will be enlarged and increased in number.

During the First Five-Year Plan reclamation work was done on the following areas: the Great Danube-Tisa-Danube Canal, the Lonjsko and Odransko Polje (Plain), Lake Skadar, Pelagonija, Strumica Polje, Bosanska Posavina, and Prekmurje.

MECHANIZATION OF AGRICULTURE

Agricultural machinery stations are constantly increasing their production. In 1945, a single 15-horsepower tractor plowed 72 hectares, in 1946, 138 hectares, in 1947, 182 hectares, and in 1948, 211 hectares.

Very probably the estimate of 243 hectares for 1949 will be surpassed.

The following examples demonstrate how production has increased through mechanization:

1. For plowing one hectare of land by animal power, 15-20 man-hours are needed, while for plowing with a tractor (a 30 to 35-horsepower tractor working one shift) only 4-5 man-hours are needed. In this example, labor productivity has increased five times.
2. For picking one hectare of sugar beets by hand, 22 man-days (on the basis of 10 working hours per day) are needed, while 1.7 man-days are needed when the picking is mechanized. This shows an increase of 13 times.

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3. For digging potatoes on an area of one hectare, 13 man-days are needed, while only 2 days are needed when the picking is mechanized. This shows an increase of six times.

In 1947, agricultural machines did 24 percent of the entire work on state farms. In the fall campaign of 1948 they are expected to do 55 percent, and in the summer of 1949, 85 percent.

The peasants in cooperatives were given 200 million dinars by the government in 1948 for tractor operations.

COOPERATIVE FARMS

In June 1949, there were 4,280 cooperatives with 219,000 families and over 1,170,000 hectares of land in Yugoslavia.

The 1948 average crop yield of cooperatives in the entire country was greater than the total average yield, i.e., 182 metric centners greater in wheat, 1.5 metric centners greater in barley, 3.83 metric centners greater in oats, and 1.54 metric centners greater in rye per hectare.

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